Common UML errors

**implicit association**

E.g.,

<table>
<thead>
<tr>
<th>Dorm</th>
<th>Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>DormName PK</td>
<td>FloorName PK</td>
</tr>
<tr>
<td>:</td>
<td>:</td>
</tr>
</tbody>
</table>

This tells us that exactly one dorm per attribute.

And this notation additionally tells us that part of key for Floor should be Key of Dorm.

**Circularity** multiple paths lead to redundancy & invite inconsistency.

<table>
<thead>
<tr>
<th>Room</th>
<th>Dorm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:*</td>
<td>1:*</td>
</tr>
</tbody>
</table>

A Room can be associated with Dorm 1 directly & Dorm 2 through Floor! Not UML problem so much as "style" problem.
UMLA "errors" continued

this when you really want this

this says that each sensor has to service at least 1 dorm and at least one academic building

this says that each sensor has to service at least one building

weird notation

what is this? 1:*?

0:*?

always give an upper & lower "bound" (symbol)

odd ternary constructs

Consider

PK

PK

PK

association classes don't have primary keys

This won't translate to tables such that the DB can store that Doug lived in McGill during 3/5/00-9/2/09 AND 4/7/06-5/1/07
Common UML & Table/Assertion Inconsistencies

UML → Correct translations

CREATE TABLE Floor(
    3 Sid Integer NOT NULL BOTH
    3 FK (Sid) Refs Sensor 1..1
)

Same as above but leave NOT NULL off

1..* one or more require (typically) a (participation) constraint